ATTACHMENT - CLAIMS LISTING

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled)

2. (Currently Amended) A method according to claim ~~1~~ 130, in which the predetermined authentication information stored by each authentication storage ~~means~~device corresponds to information which is used to authenticate a user of that authentication storage ~~means~~device in relation to the telecommunications system.

3. - 4. (Cancelled)

5. (Currently Amended) A method according to claim ~~1~~ 130, wherein each user is authenticated in the telecommunications system by a smart card or subscriber identity module, and in which the authentication storage ~~means~~device respective to that user corresponds to or simulates the smart card for that user.

6. (Currently Amended) A method according to claim 5, wherein the smart card or subscriber identity module authenticates the transaction ~~when~~ after the smart card or subscriber identity module is operable in a terminal usable in a mobile and/or cellular telecommunications system.

7. (Previously Presented) A method according to claim 6, wherein the smart card or subscriber identity module is operable to authenticate the terminal in the mobile and/or cellular telecommunications system.

8. - 10. (Cancelled)

11. (Currently Amended) A method according to claim ~~1~~ 130, in which the authentication storage ~~means~~device is incorporated on a data carrier for data or software for use by that data processing apparatus.

12. (Currently Amended) A method according to claim ~~1~~ 130, in which the ~~authentication process involves~~ authenticating step includes the steps of sending of a message, and ~~the generation of~~ generating a response dependent on the message and the predetermined information.

13. - 16. (Cancelled)

17. (Currently Amended) A method according to claim ~~1~~ 130, further including the step of operatively coupling the authentication storage ~~means~~device for communication over ~~to~~ a carrier with the transaction manager.

18. (Cancelled)

19. (Previously Presented) A method according to claim 17, wherein the carrier is operatively coupled to the data processing apparatus by a wireless link.

20. (Previously Presented) A method according to claim 17, wherein the authentication storage ~~means~~device is removably coupled to the carrier.

21. (Cancelled)

22. (Previously Presented) A method according to claim 17, comprising the step of using said carrier to obtain user security data independently of the data processing apparatus, and analysing the user security data for determining whether to allow access to the predetermined information.

23. (Original) A method according to claim 22, wherein the security data is obtained by alphanumeric data entry ~~means~~.

24. (Cancelled)

25. (Currently Amended) A method according to claim 22, wherein the user security data comprises a Personal Identification Number (PIN) and the analysing step compares the PIN obtained by the security data entry ~~means~~device with a PIN stored on the authentication storage ~~means~~device and only allows access to the predetermined information when the respective PINs match.

26. (Cancelled)

27. (Previously Presented) A method according to claim 17, wherein communication with the data processing apparatus is controlled by a data processing module.

28. - 29. (Cancelled)

30. (Previously Presented) A method according to claim 27, wherein the data processing module of the carrier decrypts encrypted data received from the data processing module of the data processing apparatus.

31. (Previously Presented) A method according to claim 27, wherein the data processing module of the carrier encrypts data transmitted to the data processing module of the data processing apparatus.

32. (Previously Presented) A method according to claim 30, wherein the respective data processing modules comprise a key for allowing encryption and/or decryption of data.

33. (Previously Presented) A method according to claim 32, wherein the key comprises a shared secret key for each of the respective data processing modules.

34. (Currently Amended) A method according to claim 17, wherein the carrier is operatively coupled to a plurality of authentication storage ~~means~~device for respectively enabling the said authentication process and one or more other authentication processes.

35. (Cancelled)

36. (Currently Amended) A method according to claim ~~1~~ 130, including routing communications between the authentication storage ~~means~~device and the telecommunications system via the transaction manager.

37. (Currently Amended) A method according to claim ~~1~~ 130, wherein the transaction manager is implemented by the data processing apparatus.

38. (Currently Amended) A method according to claim ~~1~~ 130, wherein the transaction manager detects the operative coupling of the authentication storage ~~means~~device.

39. (Previously Presented) A method according to claim 36, wherein the transaction manager transmits data relating to an authenticated transaction to the entity to which that transaction relates.

40. - 51. (Cancelled)

52. (Currently Amended) Data processing system for carrying out an authentication process for authenticating a transaction by any one of a plurality of users with an entity, said data processing system comprising:

a data processing apparatus,

a selected one of a plurality of authentication storage devices ~~means~~ in operative association with the data processing apparatus, each said authentication storage ~~means~~ device ~~for~~ storing predetermined authentication information relating to the carrying out of the authentication process, the entity being operable to generate transaction data relating to the transaction, and

a common telecommunications system which is registerable with the plurality of the authentication storage devices ~~means~~,

a communications link with the telecommunications system by which the authentication storage devices ~~means when~~ is operatively associated with the data processing apparatus ~~is operative~~ to carry out the authentication process, and

an authenticating device ~~means~~ incorporated in the telecommunications system by which the authentication process is carried out and which involves the use of the predetermined authentication information respective to the user stored by the selected one authentication storage devices ~~means~~, the predetermined authentication information being stored by each authentication storage ~~means~~ devices corresponding to information which is used to authenticate a telecommunications terminal of that user in relation to the telecommunications system but the authentication process for authenticating the transaction by that user with the data processing apparatus not requiring use of that user's telecommunications terminal,

the data processing apparatus comprising at least a transaction manager through which communications between the data processing apparatus and the telecommunications system are transmitted and through which the predetermined authentication information is also transmitted between the authentication storage ~~means~~ device and the telecommunications system, the transaction manager being implemented by the data processing apparatus.

53. (Currently Amended) A data processing system according to claim 52, in which the predetermined authentication information stored by each authentication storage ~~means~~device corresponds to information which is used to authenticate a user of that authentications storage ~~means~~device in relation to the system.

54. - 55. (Cancelled)

56. (Currently Amended) A data processing system according to claim 53, in which each user is authenticated in the telecommunications system by ~~means of~~ the use of a smart card or subscriber identity module, and in which the authentication storage ~~means~~device respective to that user corresponds to or simulates the smart card for that user.

57. (Previously Presented) A data processing system according to claim 56, wherein the smartcard or subscriber identity module is operable in a terminal usable in a mobile and/or cellular telecommunication system to authenticate the transaction.

58. (Previously Presented) A data processing system according to claim 57, wherein the smartcard or subscriber identity module is operable to authenticate the terminal in the mobile and/or cellular telecommunication system.

59.- 60. (Cancelled)

61. (Previously Presented) A data processing system according to claim 52, in which the authentication process involves the sending of a message and the generation of a response dependent on the message and the predetermined information.

62. – 65. (Cancelled)

66. (Currently Amended) A data processing system according to claim 52, wherein a carrier is provided for the authentication storage ~~means~~device and the authentication storage ~~means~~device is operatively couplable to the carrier.

67. (Cancelled)

68. (Currently Amended) A data processing system according to claim 66, including ~~means~~ a communication device for ~~allowing~~ wireless communication between the carrier and the data processing apparatus.

69. (Currently Amended) A data processing system according to claim 66, including a coupling device ~~means for~~ removably coupling the carrier to the authentication storage ~~means~~ device.

70. (Cancelled)

71. (Previously Presented) A data processing system according to claim 66, wherein the carrier includes means for obtaining user security data independently of the data processing apparatus and means for analysing the user security data for determining whether to allow access to the predetermined information.

72. (Currently Amended) A data processing system according to claim 71, wherein the carrier comprises an alphanumeric data entry ~~means~~ device ~~for~~ allowing the security data to be obtained.

73. (Cancelled)

74. (Currently Amended) A data processing system according to claim 71, wherein the user security data comprises a personal identification number (PIN) and the analysing ~~means~~device is operable to compare the PIN obtained by the security data entry ~~means~~device with a PIN stored on the authentication storage ~~means~~device and for only allowing access to the predetermined information when the respective PINs match.

75. (Cancelled)

76. (Previously Presented) A data processing system according to claim 66, wherein the carrier comprises a data processing module for controlling communication with the data processing apparatus.

77. - 78. (Cancelled)

79. (Currently Amended) A data processing system according to claim 76, wherein the data processing module of the carrier includes ~~means~~ a decrypting device ~~for~~ decrypting encrypted data received from the data processing module of the data processing apparatus.

80. (Previously Presented) A data processing system according to claim 76, wherein the data processing module of the carrier encrypts data transmitted to the data processing module of the data processing apparatus.

81. (Previously Presented) A data processing system according to claim 79, wherein the respective data processing modules comprise a key for allowing encryption and/or decryption of data.

82. (Previously Presented) A data processing system according to claim 81, wherein the key comprises a shared secret key for each of the respective data processing modules.

83. (Currently Amended) A data processing system according to claim 66, wherein the carrier includes ~~means~~ a coupling device ~~for~~ operatively coupling the carrier to a plurality of authentication storage ~~means~~device for respectively enabling said authentication process and one or more other authentication processes to be performed.

84. (Cancelled)

85. (Currently Amended) A data processing system according to claim 52, wherein data communications between the authentication storage ~~means~~device and the telecommunications system are routed via the transaction manager.

86. (Previously Presented) A data processing system according to claim 52, wherein the transaction manager is implemented by the data processing apparatus.

87. (Currently Amended) A data processing system according to claim 52, wherein the transaction manager is operable to detect the operative coupling of the authentication storage ~~means~~device to the data processing ~~means~~device.

88. (Previously Presented) A data processing system according to claim 52, wherein the transaction manager is operable to transmit data relating to an authenticated transaction to the entity to which that transaction relates.

89. – 100. (Cancelled)

101. (Withdrawn) A device for coupling to data processing apparatus for enabling an authentication process involving the use of separate authenticating means, the device being configured to provide a plurality of separately activatable authentication information records for use in the authentication process, the authentication information records being registered with a system including the authenticating means, the device being responsive to an input message for deriving a response dependent on the input message and on the activated authentication information record for enabling the authenticating means to carry out the authentication process via a communication link with the authenticating means in the said system whereby to authenticate a transaction.

102. (Withdrawn) The device of claim 101, including means for receiving a smart card or SIM which carries said plurality of authentication information record.

103. (Withdrawn) The device of claim 101, including means for receiving a plurality of smart cards or SIMs, each of which carries one of said plurality of authentication information records.

104. (Withdrawn) The device of claim 101, including means for releasably coupling one or a plurality of smart cards or SIMs thereto, the authentication information records being stored on the smart card(s) or SIM(s).

105. (Withdrawn) The device of claim 101, including means for receiving one or a plurality of smart cards or SIMs and for permanently coupling the smart card(s) or SIM(s) to the device.

106. (Withdrawn) The device of claim 101, including a data store for storing said plurality of separately activatable authentication information records.

107. (Withdrawn) The device of claim 101, wherein the plurality of authentication information records are selectively activated in response to a user input.

108. (Withdrawn) The device of claim 107, wherein the user input is provided by activation of a switch.

109. (Withdrawn) The device of claim 101, wherein the plurality of authentication information records are selectively activated in response to a signal received from the data processing device.

110. (Withdrawn) An authentication system for authenticating transactions of users registered with that system to enable a transaction with another system to be authenticated, the authentication system including authentication means for sending an authentication message in response to an authentication request from a subscriber and

for receiving and analysing a response thereto to determine if the received response corresponds to an expected response to authenticate the identity of the user; and security token generating means for generating a security token for use in performing a transaction with the other system.

111. (Withdrawn) The system of claim 110, wherein the security token includes data indicative of the identity of the user.

112. (Withdrawn) The system of claim 110, wherein the security token includes data indicative of the nature of the transaction.

113. (Withdrawn) The system of claim 110, including means for receiving a returned security token and for analysing the returned security token to determine its integrity and for providing a service in response to receipt of the returned security token.

114. (Withdrawn) The system of claim 113, wherein the service is the processing of a payment associated with the transaction.

115. (Withdrawn) The system of claim 110, including a register for storing data relating to a user for use in performing transactions.

116. (Withdrawn) The system of claim 115, including means for transmitting the user data in response to a request from the user.

117. (Withdrawn) The system of claim 115, including means for transmitting the user data in response to receipt of a returned security token.

118. (Withdrawn) The system of claim 115, including means for transmitting the user data in response to receipt of a returned security token, and wherein the register stores for each user separate data records for each of a plurality of other services with which

the user performs transactions, and wherein only user data for a particular service is provided in response to a request for user data.

119. (Withdrawn) The system of claim 118, wherein the returned security token is analysed to determine to which service it relates, and in response thereto user data for that service is provided to that service.

120. (Withdrawn) A system for storing user data for use in performing transactions with a plurality of service providers, wherein for each user a plurality of data records are stored for use when performing transactions with respective service providers, and wherein only a data record relevant to a particular service provider is made available in response to a request on behalf of that service provider.

121. (Withdrawn) The system of claim 120, including means for authenticating a request for user data on behalf of a service provider.

122. (Withdrawn) A data packet for use in authenticating and performing a transaction between a client and a product or service provider, the data packet including data indicative of the product or service provider identity such that the data packet is only useable to authenticate and perform a transaction with that product or service provider.

123. (Withdrawn) The data packet of claim 122, wherein the data packet includes data indicative of the client identity such that the data packet is only useable to authenticate and perform a transaction with that client.

124. (Withdrawn) An authentication system for authenticating transactions between a client and a product or service provider, including means for generating a data packet according to claim 122 and means for transmitting the data packet to the service provider.

125. (Withdrawn) A method of facilitating transactions between a plurality of users registered with an authentication system and plurality of product or service providers, the method including:

providing each user with authentication storage means storing predetermined authentication information, each authentication storage means being couplable to data processing apparatus for data exchange therewith;

generating in response to a request, made using data processing apparatus, from a user to a product or service provider a transaction request data packet including data indicative of the identity of the user and the identity of the product or service provider;

transmitting the transaction request data packet to the authentication system via the data processing apparatus;

analysing in the authentication system the transaction request data packet and extracting therefrom the identity of the user;

transmitting from the authentication system an authentication request signal to the user's authentication storage means via the data processing apparatus;

receiving via the data processing apparatus a response from the user's authentication storage means at the authentication system;

analysing said response at the authentication system to determine whether said response corresponds to an expected response with reference to knowledge of said predetermined authentication information for that user;

generating an authentication token and providing this to the product or service provider via the data processing apparatus, the authentication token indicating to the product and service provider that the user is authenticated by the authentication system.

126. (Withdrawn) The method of claim 125, wherein the authentication token includes data indicative of the product or service provider that generated the transaction request data packet corresponding to the authentication token.

127. (Withdrawn) The method of claim 125, wherein the authentication token includes data indicative of the user.

128. (Withdrawn) The method of claim 125, including receiving from the service provider at the authentication system a request for payment token, including the authentication token to which it relates, checking the validity of the authentication token prior to authorising a payment to the product or service provider from the user's account with the authentication system.

129. (Withdrawn) A method for carrying out an authentication process for authenticating a subsequent transaction by any one of a plurality of users with an entity by means of data processing apparatus, in which:

the entity generates transaction data relating to the transaction, and

during the authentication process the data processing apparatus has operatively associated with it a selected one of a plurality of authentication storage means respective to the users, each authentication storage means storing predetermined authentication information and being registerable with a common telecommunications system for which the users have respective telecommunications terminals;

the method including the step of carrying out the authentication process via a communications link with the common telecommunications system, the authentication process being carried out by authenticating means incorporated in the telecommunications system and involving the use of the predetermined authentication information stored by the selected one authentication storage means, the predetermined authentication information stored by each authentication storage means corresponding to information which is used to authenticate that user's telecommunications terminal in relation to the telecommunications system but the authentication process for authenticating the transaction by that user with the data processing apparatus not requiring use of that user's telecommunications terminal nor requiring the telecommunications terminal to be actually authenticated by that information in relation to the telecommunications system;

wherein in order to authenticate the transaction, the transaction data is transmitted between the data processing apparatus and the system via a transaction manager implemented by the data processing apparatus, and the predetermined authentication information is also transmitted between the authentication storage means and the system via the transaction manager.

130. (New) A method for carrying out an authentication process for authenticating a transaction by one of a plurality of users with an entity, said method comprising the steps of:

storing, on at least one authentication storage device of an authenticator of a telecommunications system, selected ones of a plurality of respective predetermined authentication information of each respective ones of the plurality of users, the respective predetermined authentication information corresponding to an actual authenticating information of a mechanism provided in a telecommunications terminal of each respective user which telecommunications terminal is associated with the telecommunications system;

initiating by one user a desired transaction with the entity, said initiating step including the steps of

establishing a communication between a transaction manager of the one user and a data processing apparatus of the entity and

supplying of data by the user to the data processing apparatus of the entity;

generating, by the data processing apparatus of the entity using the supplied data, transaction data relating to the desired transaction of the one user;

authenticating the one user to the data processing apparatus of the entity before completing the transaction, said authenticating step including the steps of

establishing a connection, via a common telecommunications system, between the data processing apparatus of the entity and the authentication storage device of the authenticator having the predetermined authentication information of the one user,

implementing the transaction manager of the user by the data processing apparatus of the entity, said implementing step including the step of

transmitting the transaction data between the data processing apparatus of the entity and the telecommunications system, and

transmitting the actual authenticating information of the telecommunications terminal of the user to the authenticator, said transmitting step not requiring use of the telecommunications terminal of the user;

comparing the predetermined authentication information of the authentication storage device with the actual authenticating information by the authenticator to determine if there is a match, and communicating a match to the transaction manager; and

completing the desired transaction of the one user by the data processing apparatus if a match is communicated to the transaction manager.